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NEW SPECIES OF NOCTUIDÆ FOR 1911. NO. 1.

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Demas infanta, new species.

Ground color a very dark, dull ashen or smoky gray. The head, collar and breast are paler, more whitish, less powdery, and the antennæ are yellowish. The thorax is a little paler than the primaries and the patagia are crossed by alternate bars of black and whitish as in the others of the genus. Primaries very evenly dark powdered, almost smoky, with the white showing only at the base of the wings. The median lines are just darker than the ground, single, the t.a. preceded the t.p. followed by white scales which are more obvious in the female. Lines are in course like those of *flavicornis,* but there is no connection between them and there is no obvious median shade. S.t. line outwardly dentate on the veins and emphasized by following whitish scales, inwardly diffuse. There is a dusky terminal line preceded by a whitish lunate shade line. The orbicular is small, whitish, round, tending to become punctiform. Reniform small, narrow, elongate, whitish, with a narrow dusky central line. Secondaries uniform smoky brown in both sexes. Beneath, with a whitish hoary powdering over a smoky brown base. Tuftings of anterior legs gray, else the vestiture of thorax and legs whitish.

Expands 38–42 mm. = 1.52–1.68 inches.

Habitat.—New Brighton, Penna., IV, 29 (Merrick); Pennsylvania, V, 2 (Kemp); Johnson City, Tenn., May.

Two males and one female that have come gradually into my collection during the few years recently past. They were at first considered as very dark forms of *flavicornis;* but with both sexes at hand, the difference became obvious. There is more than a casual resemblance to *Scirodonta bilineata* and I should not be much sur-

prised to find examples of this species masquerading among the Notodontids.

Demas electa, new species.

Ground color bluish ash gray, the maculation black or blackish. Head whitish, collar gray. Thorax crossed transversely by alternate bands of black and white. Abdomen smoky. Primaries with the broad sub-terminal area of the palest, least powdered ground, the darkest area extending through the lower half of wing from base to t.p. line. There is a black broken basal line and basal streak. Median lines single, black, narrow, very close together, irregular, an outward tooth from the t.a. line joining an inward curve from the t.p., and thus connecting the two in the submedian interspace. The s.t. space is very wide and is outwardly limited by the slightly irregular and dentate s.t. line which is itself outwardly defined by a whitish shade. A terminal blackish line at base of fringes. Orbicular small, round, whitish, with a black central dot. Reniform oblong, narrow, not well defined, whitish with a distinct central blackish lunate mark. Secondaries blackish, semi-diaphanous, fringes whitish, preceded and cut by blackish. Beneath smoky, powdery, secondaries paler with traces of two diffuse transverse lines and a small discal lunule.

Expands 37–40 mm. = 1.50–1.60 inches.

Habitat.—Winnipeg, Manitoba, May 31, 1909, Mr. J. B. Wallis.

Two very fine females, through Mr. Arthur Gibson of the Central Experimental Farm. As compared with the previously described species this is darker and decidedly blue gray, much better marked than *flavicornis,* with which it agrees in the connected median lines. The latter character and the more contrasting maculation distinguish it from *infanta,* than which it is also a somewhat smaller species. The type is in my collection, the paratype has been returned to Mr. Gibson.

ANTITYPE Hbn.

Under this term Hampson lists the species with lashed eyes that have been heretofore termed *Polia* in European catalogues. No American species are referred to the genus by Hampson, but a series of specimens lately received from California seem best referred to it. The characters other than the lashed eyes are given by Hampson as follows: "Proboscis fully developed; palpi obliquely upturned, short, the 2nd joint thickly clothed with hair in front; frons smooth, rounded, eyes large; antennæ of male typically ciliated; thorax clothed chiefly with scales, or with hair and hair-like scales, the pro- and meta-thorax with spreading crests; pectus clothed with long hair; tibiæ fringed with hair; abdomen with dorsal crests on basal

segments. Fore wing with termen crenulate; . . ." The venation offers nothing that is peculiar. The species I have called:

Antitype uintara, new species.

Ground color a dull dark luteous, more or less black powdered, in fresh examples reddish or even with a carmine flush; but that seems to fade out in most examples leaving a smoky or even blackish suffusion that gives the forewings a mottled appearance. Head and thorax with an intermixture of rusty, red and blackish, forming no definite maculation. Primaries with all the lines present, varying from red to brown or black. Basal line geminate, broken; upper half of basal space dark, lower half of the luteous ground, more or less powdered. T.a. line geminate, nearly upright, the outer element distinct, lunate or outcurved in the interspaces, inner element obscure, powdery, broken. T.p. line crenulate and somewhat irregular, as a whole outcurved over cell and only a little incurved below; the inner element usually black, the outer powdery and followed by a row of white or whitish venular dots which are sometimes conspicuous. A diffuse dusky median shade sometimes darkens almost the entire median space. S.t. line very irregular, marked by the contrast between the dusky s.t. space and the terminal space which is of the ground color. There is a series of distinct, rather large terminal lunules, a pale line at the base of the broad tan-brown fringes and a series of dusky lunules at tip of fringes, giving them a crenulate appearance. Claviform wanting. Orbicular small, of the ground color, indefined, varying a little in form but usually almost round. Reniform moderate or rather large, broad kidney-shaped, of the ground color except for a central mark, not distinctly outlined. Secondaries whitish and semi-transparent at base, with a broad almost blackish outer border, the veins blackish: a small blackish discal spot. Beneath, yellowish, powdery, with a distinct discal dot and a continuous extra-discal blackish line on all wings, which also darken outwardly so that the two pairs are unusually similar.

Expands 1.00–1.17 inches = 25–29 mm.

Habitat.—San Diego, Calif., XI, II, III; Witch Creek, California, II, 3–14.

Fourteen examples, all males and in fair to good condition. The species belongs to the typical section of the genus in which the antennæ of male are ciliated, the joints only a little marked. The species is chunky in appearance and resembles at first sight some of the small rather broad winged species of *Mamestra*, like *cuneata*. A fresh specimen with the carmine reddish tint well-marked is really handsome; but the dull, powdery, discolored forms look sordid.

Perigea andrena, new species.

Head, thorax and primaries a soft dark smoky gray, the head and thorax sparsely mingled with whitish scales giving a vague irrorate appearance.

Primaries with the normal maculation traceable only. Basal line indicated by geminate marks on the costa only, the included space a trifle yellowish. T.a. line marked in the same way on costa, but the outer portion of line traceable by black scales in rather even interspaceal outcurves across the wing. T.p. line better marked, traceable across the wing by elevated black scales, which tend to become venular dots; the course an even outcurve over cell, only a little incurved below. S.t. line a little irregular, slightly paler, with a yellowish tinge, variably marked by darker or blackish scales; obvious only when seen at a proper angle to avoid the lustrous effect of the general surface. A series of small black terminal lunules. Claviform barely indicated by black scales. Orbicular small, round, annulate in yellowish and forming the most obvious markings. Reniform large, constricted, incompletely defined, with a partial, narrow, black edging and an incomplete inner ring of yellowish, variable in the specimens. Secondaries white, with a blackish outer border and a narrow, blackish terminal line. Beneath pale, powdery, primaries a little darker, all wings with a more or less obvious extra-median line and discal spot.

Expands 34–35 mm. = 1.35–1.40 inches.

Habitat.—San Diego, California, VII, 31, VIII, 1, XI, 2: George H. Field.

Four examples, all males, in fair condition. The vestiture of this species consists of lustrous scales, easily dislodged and in no case is the thoracic tufting perfect; but it indicates a small anterior and a larger more spreading posterior tuft. In one example there are three small dorsal tuftings on the basal segments of abdomen; but these are wanting on the others. The front is flat, without protuberance, the palpi oblique, reaching to the middle of front. The antennæ have the joints slightly marked and laterally ciliated.

POLIA Auct.

Under the generic term *Polia*, we have always had in our lists an aggregation of species that were not closely related to the European species arranged under the name, and which were not even generically identical. But the species were nearly all rare, were not well known, and they remained unchanged until, in 1895, Mr. Grote proposed the term *Andropolia,* without description, for *theodori* and its immediate allies. Hampson adopts this term for those narrow-winged species with an irregular s.t. line, in which the shadings form two more or less conspicuous triangular patches basing on the outer margin, the apices touching the t.p. line opposite cell and opposite anal angle. The other broad winged forms are referred to *Eurotype* Hampson, and are closely associated with *Xylotype capax* which is a

correct disposition of the matter. Among the species referred to *Andropolia,* we find, first of all *A. diversilineata* Grt., to which *Polia illepida* Grt., ♀, is cited as a synonym. *Andropolia illepida* Grt., ♂, nec ♀, has *Polia resoluta* Sm., as a synonym. With this disposition of the subject I can scarcely agree. Mr. Grote described his *Hadena diversilineata* from a single male collected by Packard, and that type I saw in the Cambridge collection: a badly patched example, covered with mildew, and Mr. Grote seems not to have recognized the species again at any time later. Certainly when, two years thereafter, he described *Polia illepida,* he makes no reference to *Hadena diversilineata,* and he then had both sexes before him. This is not a rare species and Mr. Grote labelled up a number of specimens of both sexes, one of which, a female, is now before me. After seeing types of both species I united them in my Catalogue.

Hampson in his monograph separates the two species as follows:

Forewings with median lines distinct.....*diversilineata*
Forewings with median lines almost obsolete .....*illepida*

and this is in line with Mr. Grote's original descriptions. He also brings out a difference in the ground color of primaries, making *diversilineata* gray-white, thickly irrorated with black, while *illepida* is pale gray, suffused and irrorated with red brown. He had before him when he made this separation the male type of *illepida,* and of *diversilineata* there were 1 ♂ and 5 ♀.

I have before me at present, a series of 7 ♂ and 13 ♀ which divide rather nicely into two groups, 3 ♂ and 3 ♀ having a reddish suffusion through the primaries and giving, as a whole, an impression of red, while the others lack all this tingeing and give, as a whole, a decided impression of blue gray, with whiter secondaries. In both series there are specimens in which the median lines are distinct and continuous, and others in which they are practically obsolete, with all sorts of intermediate stages. Furthermore, in the males the lines are generally less distinct and more have them obsolescent, than in the females. None of the ornamental characters in Hampson's descriptions mark permanent differences, and the only thing that does remain is the reddish shading of *illepida* as against the blue gray of *diversilineata.* I have both forms from Colorado but the bulk of my *diversilineata* series is from Arizona and New Mexico. It is also interesting to note that the type locality for *diversilineata* is Manitou

and that I have examples of both forms labelled Colorado Springs, which is practically the same. I have the two series separated in my collection, but doubt whether there are really two species.

Polia resoluta Smith, on the other hand, is altogether different from either of the preceding. The female type is before me and has a pure white ground and white secondaries, besides differing in other details. It is paler than the male type, but I have another female that matches the male more nearly in that respect. It differs from both *illepida* and *diversilineata* far more than these differ from each other, and I feel sure that Sir George could not have seen my species at all.

I have another series of five clean and definitely marked examples from Utah, which stand out at once and are surely undescribed.

Andropolia submissa, new species.

Ground color of head, thorax and abdomen white, more or less closely black powdered, so that it may at first impress one as light blue gray. Head with a black frontal line. Collar with a variably marked dusky shading, which may be entirely absent below tip. Patagia sometimes with a fairly marked submarginal dark border, more often without obvious maculation. Primaries neatly marked, very like *illepida* on the whole, but varying in the relative distinctness of the individual features. In all cases the single black or blackish median lines are present; t.a. with a slight and rather even outcurve to vein 1, below which it curves out rather abruptly; the t.p. bent abruptly outward below costa and then very evenly, almost parallel with the outer margin to the inner border. The s.t. line is very irregular, forms two long black teeth on veins 3 and 4, reaching the outer margin at that point, and above and below this so shaded as to form two triangular black patches which vary much in distinctness. Quite usually a black streak from the lower dark patch extends inward across the t.p. line and well into the median space below vein 2. A median shade starts obliquely outward from a well-defined black or blackish costal patch to the lower angle of the reniform; then becomes less distinct and runs parallel with and close to the t.p. line. The basal line is fragmentary, but marked in all cases, tending to become geminate, and in the best marked individual there is a slender black line from base to t.a. line, at the point where the small, loop-like claviform is attached. This line and even the claviform may be altogether wanting. Orbicular concolorous, irregularly ovate, oblique, moderate in size, incompletely outlined. Reniform large, kidney-shaped, tinged with rusty brown, more or less invaded inferiorly by the median shade, outlined by darker scales and a somewhat broader pale annulus within them. A series of black terminal lunules. Secondaries whitish to a rather faint extra-median line, beyond which they are blackish gray, darkening to the white fringes. Beneath, whitish with scanty black

powderings, most obvious on the primaries. In the best marked examples a dusky discal spot and an extra-median spot are traceable; but usually there is no obvious maculation.

Expands 1.60–1.75 inches = 40–44 mm.

Habitat.—Provo, Utah, VIII, 8, Mr. Tom. Spalding.

Five females in good condition, varying greatly in markings, but yet looking very much alike. On the whole much paler than in *diversilineata* and without the reddish shading of *illepida*.

So closely does this species resemble the others referred to this series, that it is fair to assume that the male will be found to have pectinated antennæ.

Polia theodori Grt. and **Polia epichysis** Grt.

These are two remarkably similar forms, described as distinct by Mr. Grote, but usually accepted as color variations and so referred by me. Hampson follows the reference, with both types and an apparent total of five examples of both forms under examination. With a materially larger series of each, I am not so sure as I once was, of their identity, the pure white secondaries of both sexes in *theodori*, standing out prominently against the smoky reddish suffusion in *epichysis*.

A much smaller species evidently belonging here but unlike any other thus far described, is

Andropolia olga, new species.

Head, thorax and primaries white, powdered with black atoms and locally suffused with rusty brown. Head with a broad inferior black band and a narrow interantennal black line: sides of palpi rusty brown. Collar dark brown above a narrow black line. Disc rusty brown, posterior tuft marked with umber brown. Patagia with a rusty shading, edged by a narrow black line. Primaries with rusty shading at base, through the outer half of median space and over the s.t. line, not defined nor exactly localized. Transverse lines black, distinct, single. Basal line broken, dentate. T.a. line outwardly oblique, strongly dentate, the tooth below vein 1 connecting with the median shade and greatly narrowing the median space. T.p. line narrow, only a little denticulate, moderately outcurved over cell and nearly parallel with outer margin below it. Median shade broad, conspicuous, diffuse, outwardly oblique from costa to lower outer angle of reniform, then close to and parallel with t.p. line to inner margin. S.t. line conspicuous, black, irregular, diffuse, with strong outward teeth not reaching the margin on veins 3 and 4, a long inward tooth to the t.p. line opposite cell, and a similar tooth in sub-median interspace, where a brown shading obscures a black streak which is traceable from the outer margin to the narrow loop-like claviform. A diffuse brownish black

shade extends through the lower half of submedian interspace from base to median shade. Orbicular oval, decumbent, broadly black-ringed, centered with rusty. Reniform moderate in size, kidney-shaped, black-ringed, rusty-centered, Secondaries white, with a slightly iridescent smoky shading which is most obvious at hind angle. Beneath white, a little powdered, with a punctiform extra-median line and a discal spot on each wing.

Expands 1.55 inches = 39 mm.

Habitat.—Sierra Nevada, California.

One male in good condition, which has been in my collection for twenty years or more. It is a conspicuous form and I have been constantly hoping to get others—thus far without success.

The antennæ of the male are ciliate and the species is therefore related to *theodori,* to which also the type of maculation refers it.

XYLOMIGES Gn.

In re-arranging my specimens belonging to this genus (*Xylomania* Hampson), I separated out the sexes of the long suites of the *rubrica* series and noted, what I had not realized before, that all the uniformly colored specimens were males, and that all those in which there was a curved black shading that separated off a more or less contrasting apical area were females. It turned out that I had 21♂ and 20 ♀, and that these separated very nicely into three distinct types. Of *X. pulchella* Sm., I have 2 ♂ and 1 ♀, and they differ from all others in the very dark basal and s.t. areas, leaving the median space contrastingly pale with only a slight reddish tint. The curved shade in the female is broad, black and contrasting. They are from Vancouver, Laggan and N. W. British Columbia without dates.

Of *X. rubrica* Harv., I have 8 males and 7 females coming from California, Oregon, Washington, Colorado and British Columbia: all early dates—March and April. Hampson had only 2 females of *rubrica,* one of them the type, and the figure 14 on his plate LXXXIX, is a very good representation of that sex. Of *X. perlubens* Grt., he had only the male type and that is figure 19 of the same plate, and not so good a figure. There is no doubt however that it is the male to Harvey's species, and is not my *subapicalis*, which has the sexes similar and has a narrower curved shading on a much darker base. *Rubrica* has the median lines distinct in both sexes, the coloring and maculation is lively, and is a mottling of creamy, reddish and gray tints, with the black or blackish brown curved subapical mark in the female strongly contrasting.

There remains a series of 11 males and 11 females, all from Pullman, Washington, in May, and all very much more uniform in tint. The males are almost uniform reddish gray, the median lines lost, the s.t. rather contrastingly yellow and very narrow. The ordinary spots are fairly well defined; but are scarcely relieved in tint. The female is brighter and the apical area is paler and with a reddish shading; but the curved shading is only blackish, outwardly diffuse and not contrasting. This form I have labelled *mustelina*, and it forms the beginning of the development of the series which culminates in *pulchella*.

Subapicalis is not so closely allied to this series as I had believed from insufficient material, and the original reference of my species to the synonymy was made by myself after an inspection of Grote's type of *perlubens*. Hampson apparently did not have my species at all, and simply followed my reference.

Tricholita ulamora, new species.

Head and thorax hoary reddish gray, almost fawn gray, immaculate. Primaries dull reddish brown, powdery, the white-marked reniform being the only conspicuous feature. The median lines are very narrow, black, thread-like, the t.a. with large outward teeth in the interspaces, the t.p. narrowly crenulate. A narrow black terminal line, cut by yellowish venular dots at base of fringes. Claviform small, vaguely indicated by black scales. Orbicular small, round, concolorous, very narrowly black-ringed. Reniform small, narrow, upright, outwardly and inferiorly marked with white dots that relieve it from the surroundings. Secondaries whitish, black powdered, with a small black discal dot. Beneath smoky, powdery, primaries much darker, each wing with a discal spot.

Expands 1.34 inches = 33 mm.

Habitat.—San Diego, California, X, 20, 1908, Mr. George H. Field.

A single male in good condition, the antennæ lengthily pectinated. The species somewhat resembles *artega* Barnes, which has however more pointed primaries, and has the secondaries of the male smoky fuscous, without discal spot.

It was received from Mr. Field under the number 73, and has had no mates since its receipt, from any source.

Tricholita endiva, new species.

Head, thorax and primaries a rather soft mouse gray, the head and thorax without markings. Primaries with all the transverse maculation lost except for the narrow terminal blackish line which is very narrowly cut with

white on the veins. The loop-like concolorous claviform is narrowly outlined in black in most specimens, but tends to become obsolescent. Orbicular obsolete. Reniform small, narrow, a little constricted, with the inner margin obscurely defined by black scales, the outer edge marked by a series of small white dots: a white spur runs back from lower angle of reniform along the median vein; usually a very short distance only—exceptionally nearly half way to the base; and usually this streak is edged by black scales. Secondaries, in the male soiled white, with a small dark discal dot and a narrow blackish exterior border: in the female blackish throughout, paler and somewhat more transparent at base. Beneath whitish, powdery, in the male, blackish powdery in the female.

Expands 1.06–1.16 inches = 26–29 mm.

Habitat.—Yavapai County, Arizona, in September (Mr. Otto Buchholz); Santa Catalina Mts., Arizona, in September (Dr. Barnes); Ft. Wingate, New Mexico, August 28.

Four males and four females in good or fair condition—five of them from Mr. Buchholz who has others. This is a little smaller and much darker than *chipeta* Barnes, which it resembles most nearly in maculation. In the latter the markings are also much better written, the orbicular is distinct in all the specimens before me and the claviform is usually connected with the base by a narrow black streak. I had confused the two examples that I had prior to receiving Mr. Buchholz's specimens, with *fistula* Harv., which is a larger form and has some of the transverse maculation present in almost all examples, the s.t. space tending to become relieved against the darker terminal area. The male antennæ are lengthily, the female very shortly pectinated, resembling in this both *chipeta* and *fistula*.

Tricholita erebus, new species.

Head, thorax and primaries dull black with a purplish tinge. Head and thorax without markings. Primaries with the normal markings traceable by velvety black scales and by a few yellow scales. At base there is a velvety black mark indicating the basal line on cell. A geminate t.a. line is just traceable in some specimens and to it is attached the loop-like claviform which is distinctly outlined in velvety black in all specimens. The orbicular is small, round, narrowly black ringed and this black ring is sometimes edged inwardly with yellow scales. Reniform small, upright, incompletely outlined, the outer border edged with whitish scales. T.p. line vaguely traceable in some specimens. S.t. line indicated by scattering whitish or yellow scales, preceded by more or less obvious sagittate velvety black marks. A very narrow yellowish line at base of fringes, and small yellow dots at ends of veins. Secondaries whitish at base, darkening to blackish outwardly: a narrow blackish extra-median line and a discul mark. Beneath: primaries blackish,

powdery; secondaries whitish, black powdered; all wings with an extra-median line and a discal spot.

Expands 1.32–1.40 inches = 33–35 mm.

Habitat.—Chiricahua Mts., Arizona.

One male and three female examples in fair condition only. The specimens had evidently been papered and are somewhat flattened; but the wings and their vestiture are practically intact. No date is on the label and no indication of the source from which they were received.

The antennæ of the females are only a little less lengthily pectinated than those of the male, and in this character the relation is close to the typical species. The superficial resemblance is to *Hadena impulsa.*

Perigonica eldana, new species.

Ground color pale luteous with a slightly reddish tinge, variable in the specimens. Head inferiorly blackish, else head and thorax concolorous, immaculate; abdomen paler. Primaries more or less obviously irrorate with blackish, all the markings traceable, rarely complete and tending to obsolescence. Basal line geminate, punctiform, traceable in the best marked examples to the inner margin. T.a. line only a little irregular, moderately outcurved and outwardly oblique, the outer portion even, but tending to break; not lunulate, inner portion powdery, punctiform or altogether lost so that the line appears single. T.p. line dusky, lunulate when best marked, outer portion venular and punctiform. Median shade line obvious in all specimens, darkest and most obvious from the middle of costa obliquely outward to the lower edge of reniform, there angled and thereafter close to and parallel with t.p. line to the inner margin, becoming less obvious in the paler examples. S.t. line of the palest ground, chiefly relieved by the dusky powdering of the rest of the wing, but preceded on costa by a dusky shading. A series of black terminal dots. Orbicular round or a little ovate, moderate in size, outlined by blackish scales or almost lost in the uniform powdering. Reniform upright, a little constricted medially, vaguely outlined by a pale annulus which may or may not be emphasized by blackish defining scales. Secondaries whitish, with a smoky outer border that is less marked in the male and with a small blackish discal dot. Beneath pale with a faint reddish tinge, coarsely powdered along the costal area, all wings with a discal spot, primaries with an extramedian line which becomes lost before it reaches the inner margin.

Expands 38–43 mm. = 1.52–1.72 inches.

Habitat.—Glenwood Springs, Colorado, in May (Barnes); So. Arizona, April and May (Poling).

Three males and three females, mostly in good condition. This species resembles *angulata* Sm., in size and general appearance; but

has the antennæ of the male pectinated instead of serrated and bristled. It is the species described and figured by Hampson as *tertia* Dyar; but is not the species described by Dyar under that name. Dyar's first note on the species is in his catalogue (1902) in which he says, following the name, "markings of *angulata,* antennæ of *fulminans.*" California and Oregon are given as localities. The descriptive words would fit the species just characterized here, most excellently well, and probably Hampson depended upon them in his identification of the species. But in the Proc. Ent. Soc. Wash., V, 294 (1903), Dyar gives a further description of the species, basing it on three examples, two of them from Portland, Oregon, under date of April 23 and May 11. Two characteristic features are the definite statement that the ordinary spots are blackish filled, and the absence of all reference to a median line. The expanse is given as 37 mm.

I have two examples from Corvallis, Oregon, both taken in April —one of them April 22, and complying in every respect with Dyar's description. They are labelled *tertia* Dyar, apparently after comparison made, but there is no statement to that effect on the label.

Hampson in Vol. V of his Catalogue, p. 435, describes *tertia* Dyar, from one Californian and two Arizona examples, no definite locality being given in either instance. Portland, Oregon, is also cited, evidently from Dyar, but the description accords in no way with that given by the latter author. The angulated median shade is specifically mentioned and the ordinary spots are said to be ill defined and the reniform merely darkened inferiorly. The expanse is given as 44 mm., as against 37 mm. The figure 30, on plate XC, is from an Arizona specimen and represents perfectly the little series of six examples now before me. Dr. Dyar's species as based on the Oregon examples and his description, is a perfectly good one and entirely distinct from the species characterized under the same name by Hampson, which I have just described as *eldana. P. punctilinea* Sm., from the same general region, has the primaries much less angulated and has dusky secondaries, resembling the species of *Stretchia* more closely.

Perigonica fermata, new species.

Ground color pale luteous, with a more or less obvious reddish tinge and, in some specimens, a scant powdering of fine black atoms. Head inferiorly

and palpi, blackish at sides: else head and thorax uniformly of ground. Primaries without contrasts, the usual maculation very finely written. Basal line geminate, tending to become lost, usually marked by a pair of oblique dusky streaks below median vein. T.a. line geminate, tending to obsolescence, and entirely lost in some specimens; in the best case broken, nearly upright, a little outcurved between the veins. T.p. line usually reduced to a narrow pale line and a series of small black venular dots, as a whole broadly bisinuate: in some examples the pale line tends to obtain a definite margin at some parts of its course. S.t. line narrow, pale, continuous, almost parallel with outer margin. Small black terminal dots in some specimens only. An oblique dusky median shade is marked over the costal region in all specimens and is lost in the reniform or only vaguely traceable below it, close to the t.p. line. Orbicular concolorous or a little darker, narrowly pale ringed, moderate in size, oblique, oval. Reniform a little darker than ground, narrowly pale ringed, narrow, very much elongated. Secondaries whitish, semi-transparent, veins a little soiled. Beneath whitish, powdery along the costal and apical region, primaries with a dark discal spot and extramedial line; secondaries with costal spot only.

Expands 1.36–1.48 inches = 34–37 mm.

Habitat.—San Diego, California, in early March.

Six males and one female in fair condition only, received through Mr. H. H. Brehme. The female is a little darker than any of the males and the ordinary spots are a little more relieved; but otherwise there is no difference. The angulation of the primaries is well marked and the indications are that in perfect specimens the fringes are crenulated.

STRETCHIA Hy. Edw.

In re-arranging the species referred to this genus in our lists, divided by Hampson among *Perigrapha, Stretchia, Xylomania* and *Monima,* I was struck with the remarkable constancy of the species when properly separated out and with the ease with which a little carelessness or lack of sufficient material, may give an erroneous impression.

For convenience I list all the species mentioned here as *Stretchia,* and give the order in the apparent relation of our own species.

S. prima Sm. Only a single male example from Sierra Nevada; very unlike any other of the species.

S. normalis Grt. Fifteen examples, nearly equally divided as to sex and practically alike, though they range in locality from British Columbia to middle California, and six widely separated points are represented. The only difference is in the amount of contrast and

that may be due in most instances to the age or condition of the examples.

S. inferior Smith is not represented in the series now before me.

S. plusiiformis Hy. Edw. Ten males and three females from various points in Colorado and Washington. Practically no differences in the markings; but quite some difference in the amount of contrasts. An unusually bright example might readily be referred to *muricina*, and indeed my series was mixed. In *plusiiformis* the terminal and s.t. areas are of the same gray color, and the s.t. line is practically parallel with the outer margin. In *muricina* the terminal area is paler than the rest of the wing, and the inner margin of this pale area forms a very decided inward curve or arcuation.

S. muricina Grote. Four males and two females, much brighter and more contrasting than *plusiiformis*, from which it has been differentiated above.

S. behrensiana Grote. Not represented in my collection.

S. accurata Hy. Edw. Described as a *Plusia* and looks it. I have only one female from Las Vegas, New Mexico.

S. erythrolita Grote. I was rather proud of my series of this species, containing 13 ♂ and 16 ♀ and meant, after separating out the sexes, to make a series running from almost uniform powdery gray to nearly black; but after I had made my separation of the sexes there was a hitch in forming the series, until I recognized that I had three species. The type form of *erythrolita* Grote was fixed by a specimen bearing the author's label, coming from the type material and agreeing also with Hampson's figure and description. Of this I have six males and four females. The males are very uniform in color and appearance, the females differ a little more. In all cases the primaries are pale violet gray, a little powdery, and the median lines are lost. The ordinary spots are more or less darkened, narrowly ringed with yellow and always present. The s.t. line is characteristic, bi-sinuate, never continuous, not reaching the costa in any case, preceded by a blackish shading which is always interrupted in the middle and tends to become reduced. In the male the only variation noted is the tendency to lose all the blackish shadings. Among the females, one example is an almost uniform smoky gray. My examples are from Witch Creek and San Diego, California, and are dated in February.

Stretchia apicata, new species.

Resembles *erythrolita* in general type of maculation and appearance: but is a little more robust and of a powdery fawn brown. The median lines are traceable by venular dots, the reniform is a rather large, ill-defined dark blotch, and the s.t. line is almost or quite continuous to near costa, where it is met by a little spur from the apex, so that the line to all appearance runs continuously to the apex itself and not to the costa. The blotchy reniform, the ground color, and the course of the s.t. line, characterize the species.

The male is labelled San Diego in February, the female Pasadena, IV, 30. There are only two examples, and there may be more variation than I suspect, when more material comes to hand.

Stretchia acutangula, new species.

Has the pale blue gray ground of *erythrolita*, and looks like a form of that species in which the transverse maculation is present. In normal examples the geminate median lines are well marked, and a well defined median shade is also present. The s.t. space is always dark, in contrast to the pale terminal area, and the s.t. line is thus continuously and sharply defined for its full length; a very distinct and sharp tooth being formed just below the apex, which is the characteristic feature of this species. The tendency is for the blackish s.t. shade to extend inwardly and, in the male, it reaches the median shade in one example. In the female it may reach the t.a. line, leaving only the basal area gray and, indeed, in that sex the entire specimen may become so uniformly smoky that even the characteristic s.t. line is to be made out only with difficulty.

There are 6 ♂ and 11 ♀ from Witch Creek, San Diego, Monterey and Pasadena, California, in November, February and March.

S. pulchella Harvey.

Of this species I have only 2 ♂ and 2 ♀, from Colorado (Bruce) and California; one example labelled Santa Clara Co., the other with a State label only. No two specimens are alike, and at first blush an extremely variable species is indicated. But here again, careful study shows that the markings in all are absolutely identical and only the relative distinctness of the ornamentation varies. The characteristic feature of the species seems to be the very strongly crenulated t.p. line, and the well defined dusky orbicular. I re-described the species as *addenda*, from a type showing no marked contrasts, and came near re-describing it again as *orbiculata* from a type in which the orbicular is unusually contrasting. Hampson with both species before him did not recognize their relationship, and refers *pulchella* to *Perigrapha*, while *addenda* figures as *Monima*.

S. fringata Smith.

Described under *Tæniocampa,* but belonging better with this series. There are 17 ♂ and 1 ♀ under examination, all from Monterey Co., California, in March, and all practically alike. The color is a very uniform pale reddish brown, with a tendency to a violet gray suffusion, and all the normal maculation is present, just enough darker than the ground to be easily traceable. The wing-form and general appearance is not unlike the more uniform examples of *pulchella,* but the antennæ are very shortly pectinated and not much more marked than in *præses.*

Stretchia algula, new species.

Deep purplish red brown, with a tendency to violet gray. Head and collar tending toward a more crimson tinge; but this varies and on the collar is not always uniform. On the primaries the maculation is just traceable in some of the specimens, altogether lost in others, and distinct in none of those before me. The median space may be a little darker and the moderate, well separated ordinary spots, may have slightly paler annuli that bring them somewhat into relief. The median lines are geminate, the outer portion of t.p. line venular and punctiform. Secondaries dull smoky brown in both sexes. Beneath with a crimson tinge, powdery, disc of primaries darker, secondaries paler, with a discal mark and a more or less obvious extra-median dotted line.

Expands 1.36–1.52 inches = 34–38 mm.

Habitat.—Arrowhead Lake, British Columbia.

Two ♂ and 4 ♀, all from the Barnes collection. The species is a very robust one, with lengthily pectinated male antennæ, and there seems to be nothing in our fauna with which it might be readily confused. Except for the slight differences in distinctness of maculation there is absolutely no variation.

S. achsha Dyar. Two males and one female from Arrowhead Lake, out of the Barnes Collection, agree almost perfectly with the description and I have little doubt as to the identity of the species. The specimens are very much alike, and easily recognizable by the peculiar contrasts in shading on primaries. The ordinary spots are well separated, narrowly ringed with pale and the median lines are geminate. The primaries are violet gray except in the lower portion of basal and most of the median space, which are purplish red brown.

S. transparens Grt. Not in my collection and seems to be rare. *Orthosia hamifera* Grt. is cited as a synonym and the only specimens known to me are in the U. S. N. M.

S. præses Grt. I have 4 ♂ and 3 ♀ of what may be considered the more typical form, and two males of whose standing I am uncertain. In this form the male antennæ are serrate and bristled rather than actually pectinated, and the head and collar are paler than the body of the thorax. On the primaries the ordinary spots tend to become confluent, and the s.t. line is well defined or even contrasting. There is a tendency to a black filling between the ordinary spots; but how far this goes, my series leaves me in doubt.

Extends from Monterey, California, north to British Columbia.

S. salcppa Smith. Agrees with *præses* in the paler head and collar, but is otherwise amply distinct. It is a strigate, mottled form, tending to become blotchy, and altogether different from the smooth even markings of *præses*. My series at present contains 5 ♂ and 2 ♀. All my examples are from Wellington, British Columbia, and were taken in April.

Pleonectyptera serena, new species.

Ground color ranges from pale or bluish ashen to reddish or yellowish gray, the gray sometimes tending to drop out of the reddish or yellowish combination. Primaries more or less powdery. Median lines incepted at costa by more or less obvious black or blackish triangular spots. T.a. line nearly upright, almost rigid, consisting of a rusty reddish or yellowish inner and a smoky or blackish or black outer line. This is a variable feature, the line being scarcely traceable in some examples, while in a very few, the blackish or black portion only is obvious, usually more or less broken. T.p. line very evenly and only a little bi-sinuate, sometimes broken or bent on the internal vein. It consists of a rusty reddish or yellowish central line, inwardly bordered by a narrow blackish or smoky line and outwardly by the darker s.t. space more or less emphasized by smoky or black margining scales. This line also varies, but is always conspicuously present and the pale included shade is always one of the obvious features. The preceding shade line is a continuation from the costal spot and is most often narrow, smoky and continuous: it is rarely altogether absent, but may be broken and sometimes is marked with black scales, especially between veins 1 and 4: in one example it is almost continuously black. The s.t. line is rather irregularly and strongly sinuate, making a rather small outcurve over veins 7–9 and another, much better marked over veins 3 and 4, where small outward dents often break into the terminal space. This line is usually marked by the difference between the dark subterminal and paler terminal space: sometimes it is an almost continuous white line, sometimes it is broken into white dots and sometimes it is preceded by a distinct darker shade which may be emphasized by black marks. There is a more or less obvious series of blackish terminal lunules. The s.t. space is usually the darkest part of the wing; but the shad-

ing may be continuous and contrasting, or it may be more or less broken and inconspicuous. Reniform moderate in size, black powdered, rarely contrasting, more or less obviously kidney-shaped. Secondaries whitish, tinged with smoky, yellowish or reddish as the ground may be, outwardly darker and tending to form an extra-median or sub-marginal transverse line: discal spot usually indicated, never obvious. Beneath reddish to yellowish with the maculation of upper surface more or less obviously indicated, discal dots usually obvious.

Expands, .84–1.00 inches = 21–25 mm.

Habitat.—San Diego, California, V, 2, VI, 9, VII, 31, VIII, 1, IX, 29; Plumas Co., Calif., V, 1; Pasadena, Calif., VI, 20: "California," III, 21.

Ten males, 14 females, most of them good specimens, and all the San Diego examples from Mr. George H. Field. The species is a variable one as appears from the description, and two broods appear to be represented. The early specimens are usually larger, and better, more contrastingly marked: the latter examples are smaller and more even—having indeed a somewhat washed-out appearance. I was at first inclined to suspect two species, appearing at different dates; but some of each series agree perfectly with examples of the other.

This species has the appearance and habitus of *finitima*, with the maculation of *secundalis*, especially in the course of the s.t. line; but I believe it to be perfectly distinct from each.

In the Pomona College Journal of Entomology, Vol. II, p. 375, Dr. Harrison G. Dyar describes *Pleonectyptera cumulalis* and writes in comment: "This appears to be the species misidentified by Smith as *P. finitima* Smith (Trans. Am. Ent., XXXIII, 377, 1907) which therefore requires a new name. The types of *finitima* are identical with *tonalis* Smith of the paper cited, the name *finitima* having precedence."

Dr. Dyar's description certainly fits the *finitima* of my paper and my description in that paper fits the specimens under that name in my collection. I am therefore agreed that *cumulalis* Dyar, is the same as *finitima* Smith, Trans. Am. Ent. Soc., 1907 and also of the original description.

The original description was based on four examples received among others from Dr. Riley, for a paper to be published in Insect Life. Each of these specimens was labelled "type" in accordance with the general practice of the time. Two of them were retained by

myself and are now before me: two others were returned to the Museum. All of the examples were from the Kœbele material and, I believe, specifically identical. My own examples, therefore, are as much "type" as those at Washington, they formed the basis of both the original description and that of the revision, and the charge that I "misidentified" the species, is therefore absurd.

Pleonectyptera tenalis (not *tonalis*) was originally described from six examples, all from Arizona desert areas, and three of these, including the male and female types are now before me. Now the types of *tenalis* and *finitima* are so utterly unlike that not the merest tyro would be inclined to associate them, and if the specimens in the U. S. National Museum labelled as *finitima* type are really *tenalis* as Dr. Dyar says, it simply means that there has been a tampering with labels by somebody—a fact that I have been inclined to suspect before as to other species. It is not a matter of two closely allied species, as *finitima* and *serena* may perhaps be said to be; but of forms so utterly different in size, in color, in maculation and even in wing form, that mere error of association is excluded.

NEW SPECIES AND GENERA OF NORTH AMERICAN LEPIDOPTERA.

By Wm. Barnes, M.D., and J. McDunnough, Ph.D.,

Decatur, Ill.

Family LITHOSIANÆ.

Agylla septentrionalis, new species.

Palpi, front, antennæ and tegulæ bright orange; patagia and thorax white; abdomen dorsally gray, ventrally orange; legs orange, tarsi and half of tibiæ of first two pairs gray; primaries silvery white, costal edge blackish at base; secondaries slightly tinged with fuscous. Beneath, primaries smoky; costal edge tinged with orange in central portion; secondaries white, slightly fuscous along costa.

Expanse 38 mm.

Habitat.—Chiricahua Mts., Ariz. 1 ♀. Type Coll. Barnes.

This is the first *Agylla* species recorded from the United States. According to Hampson (Cat. Lep. Het., II) it appears to be closest